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09/166,343	10/05/1998	C STUART JOHNSON	5508-51049/M	9027

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ALCATEL INTERNETWORKING SYSTEM, INC.  
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EXAMINER

ABELSON, RONALD B

ART UNIT	PAPER NUMBER
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2666

DATE MAILED: 03/24/2003

16

Please find below and/or attached an Office communication concerning this application or proceeding.

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# Office Action Summary

Application No.

09/166,343

Applicant(s)

JOHNSON ET AL.

Examiner

Ronald Abelson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 06 February 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-14 and 16-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 22 is/are allowed.
- 6) ☒ Claim(s) 1-5, 7, 11-14, 16, 17 and 19-21 is/are rejected.
- 7) ☒ Claim(s) 6, 8-10 and 18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 September 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

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***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1, 3, 12-14, 16, 20, and 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Bremer (US 6,032,190).

Regarding claims 1, 13-14, and 21, Bremer teaches a method and apparatus for a switching device (fig. 3) for processing data packets (col. 5 lines 19 - 40) from sending ports (fig. 3 Port 0) to destination ports (fig. 3 Port 3). The method comprises storing in a first stage queue packet-related data

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from a sending port (fig. 3 box 48), determining from the packet-related data which destination ports are to receive the packet-related data in the first stage queue (fig. 3 box 52), storing in a second stage queue associated with each determined destination port the packet-related data from the first stage queue (fig. 3 box 58), and transmitting the packet-related data in the second stage queue to a switch fabric (fig. 3 box 60).

Regarding claim 3, sending the packet-related data from the sending port to the first stage queue (fig. 3 Port 0, box 46, 48).

Regarding claim 16, address resolution logic for sending the packet-related data from the sending port to the first stage queue (fig. 3 box 52, col. 5 lines 30 - 33).

Regarding claims 12 and 20, the switch is a crossbar matrix (fig. 3 box 60, 62). Note, the examiner associates a crossbar matrix switch with a standard switch.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at

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the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bremer as applied to claims 1 and 13 above, and further in view of Demange (US 5,355,522).

Although Bremer teaches storing the packet-related data/packet header (fig. 3 box 48) separately from the packet data (fig. box 50), the inventor is silent on the contents of the packet header.

Demange teaches that Ethernet and Token Ring packet (col. 2 lines 39-42) headers contain a pointer to memory (fig. 4 box 402, col. 3 lines 31-33) and destination ports information (fig. 4 box 406, col. 3 line 27).

Therefore it would have been obvious to one of ordinary skill in the art, having both Bremer and Demange before him/her and with the teachings [a] as shown by Bremer, a system for processing packet data and the corresponding packet-related data independently, and [b] as shown by Demange, Ethernet and Token Ring packet headers contain a pointer to memory and destination ports information, to be motivated to modify the system of Bremer by using a packet having a header format as detailed by Demange (fig. 4) if the network is a Ethernet or Token Ring

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network. This modification can be performed in software. This would improve the system by making it compatible with preexisting standards.

5. Claims 4 and 5, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bremer as applied to claims 1 and 13 above, and further in view of Hebb (US 6,320,864).

In addition to the limitations listed in claim 1, Bremer teaches the first stage queue includes multiple first stage queues (fig. 3 box 48, fig. 4 box 152, 154, col. 7 line 29 - 35).

However, Bremer fails to teach storing the header data based upon the characteristics of the packet / prioritization.

Hebb teaches storing packets based upon priority information that is found in the header (fig. 3 box 100a-d, col. 7 lines 17 - 19).

Therefore it would have been obvious to one of ordinary skill in the art, having both Bremer and Hebb before him/her and with the teachings [a] as shown by Bremer, a system for processing packet data and the corresponding packet-related data independently, and [b] as shown by Hebb, storing information in parallel queues based upon priority, to be motivated to modify the system of Bremer by storing information in the queues (fig.

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4 box 152, 154) based upon priority. This could be accomplished by reading the priority information found in the packet header. This would improve the system since packets with higher priority may be processed first.

6. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bremer as applied to claim 1 above, and further in view of Galand (US 5,956,341).

In addition to the limitations listed in claim 1, Bremer teaches the first stage queue includes multiple first stage queues (fig. 3 box 48, fig. 4 box 152, 154, col. 7 line 29 - 35).

However, Bremer fails to teach storing the header data based upon the characteristics of the packet / quality of service (QoS).

Galand teach storing the header data based upon QoS (fig. 8 box 802, col. 6 lines 49 - 53).

Therefore it would have been obvious to one of ordinary skill in the art, having both Bremer and Galand before him/her and with the teachings [a] as shown by Bremer, a system for processing packet data and the corresponding packet-related data independently, and [b] as shown by Galand, storing information in queues based QoS, to be motivated to modify the system of

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Bremer by storing information in the queues (fig. 4 box 152, 154) based upon QoS. This could be accomplished by reading the priority information found in the packet header. This would improve the system since packets with requiring higher QoS may be processed first.

7. Claims 11 and 19 rejected under 35 U.S.C. 103(a) as being unpatentable over Bremer as applied to claims 1 and 13 above, and further in view of the applicant's admitted prior art.

In addition to the limitations listed in claim 13, Bremer teaches multicasting (col. 6 lines 18 - 37).

The applicant's admitted prior art teaches a shared memory switch fabric for multicasting (pg. 2 lines 12 - 17).

Therefore it would have been obvious to one of ordinary skill in the art, having both Bremer and the applicant's admitted prior art before him/her and with the teachings [a] as shown by Bremer, a system for processing packet data and the corresponding packet-related data independently, and [b] as shown by the applicant's admitted prior art, a shared memory switch fabric for multicasting, to be motivated to modify the system of Bremer by replacing the switch fabric (fig. 3 box 60, 62) with shared memory switch fabrics. This would improve the system since each destination port can obtain a multicast packet



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from its storage location independent of other ports (spec: pg. 2 lines 16-17).

### ***Response to Arguments***

8. Applicant's arguments filed 2/6/2003 have been fully considered but they are not persuasive.

The applicant states (pg. 6 lines 17-25):

"the header-in store (fig. 3, box 48) disclosed by Bremer reads upon the recited first stage queue, and the header-out store (fig. 3, box 58) disclosed by Bremer reads upon the recited second stage queue. However, claims 1, 13, and 21 all require that the second stage queue store "the packet-related data from the first stage queue. In the system disclosed by Bremer, the header-in store stores the header information of an inbound data packet, but the header-out store stores a modified header information, and not the same header information retrieved from the data packet."

The examiner disagrees with the applicant that the header-out store does not store the same header information retrieved from the data packet. Bremer clearly states that the modified header includes the original header portion (col. 6 lines 60-63).

The examiner agrees with the applicant that new claim 22 is not taught by the prior art of record. A subsequent search was performed and this claim is in condition for allowance.

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***Allowable Subject Matter***

9. Claim 22 is allowed.

10. Claims 6, 8-10, and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. The following is a statement of reasons for the indication of allowable subject matter.

Regarding claims 6, 8, 10, and 22, nothing in the prior art of the record teaches or fairly suggests the packet characteristic is a network protocol type, other than whether the packet is a unicast or multicast type, data packet, or a pointer in combination with the other limitations listed in the claims.

Regarding claims 9 and 18, nothing in the prior art of the record teaches or fairly suggests the second stage queue comprises storing the data in a specific second queue based on a characteristic of the packet, in combination with the other limitations listed in the claim.

***Prior art is of record***

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12. The prior art is of record but not relied upon in the office action. Ramakrishnan (6,049,546) teaches multiple first and second queues as specified by the applicant (fig. 3).

### *Conclusion*

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronald Abelson whose telephone number is (703) 306-5622. The examiner can normally be reached on M-F.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (703) 308-5463. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-9600.

*ra*  
Ronald Abelson  
Examiner  
Art Unit 2666

*ra*  
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March 20, 2003

*DM*  
DANGTON  
PRINCIPAL EXAMINER